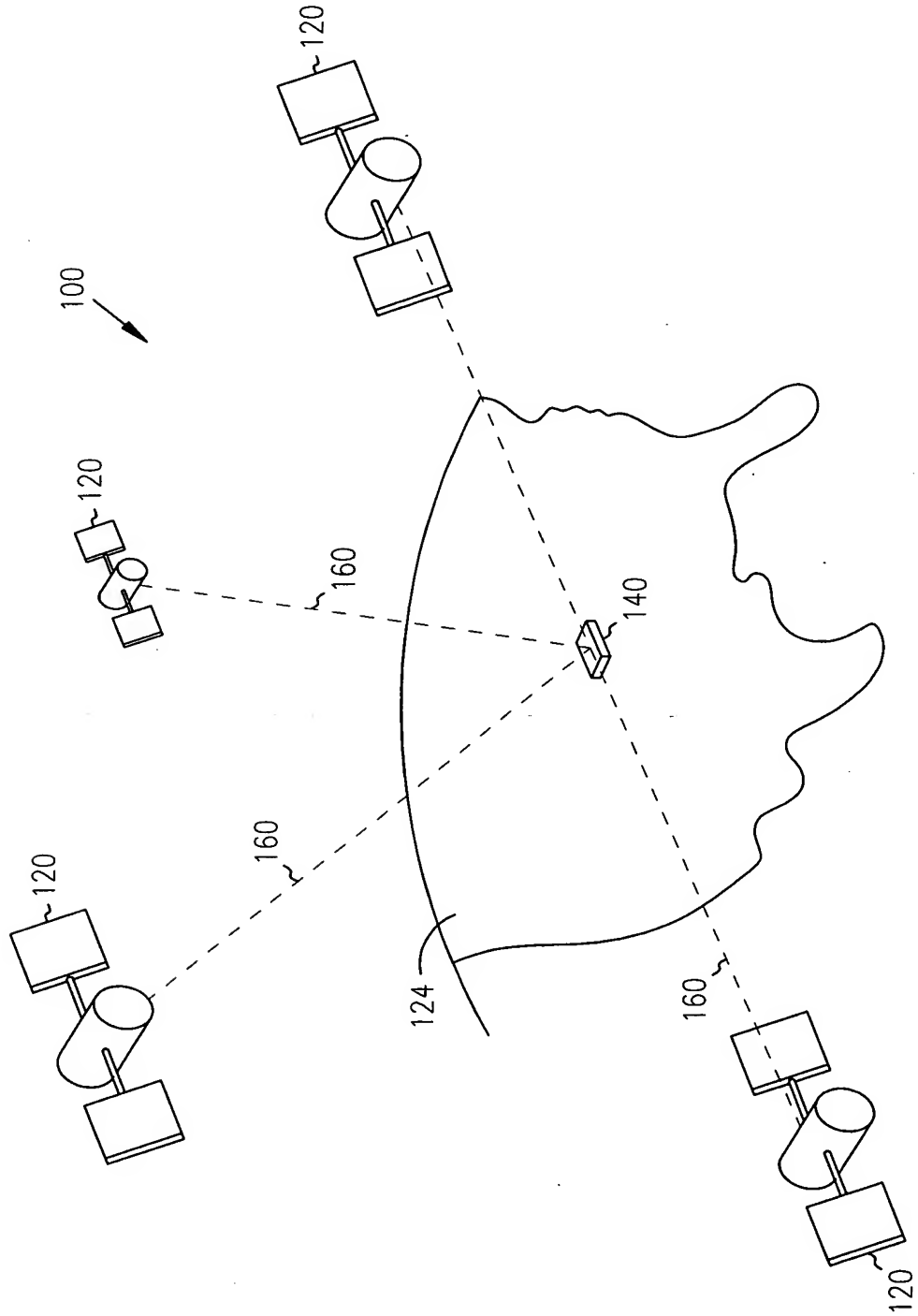

FIG. 1

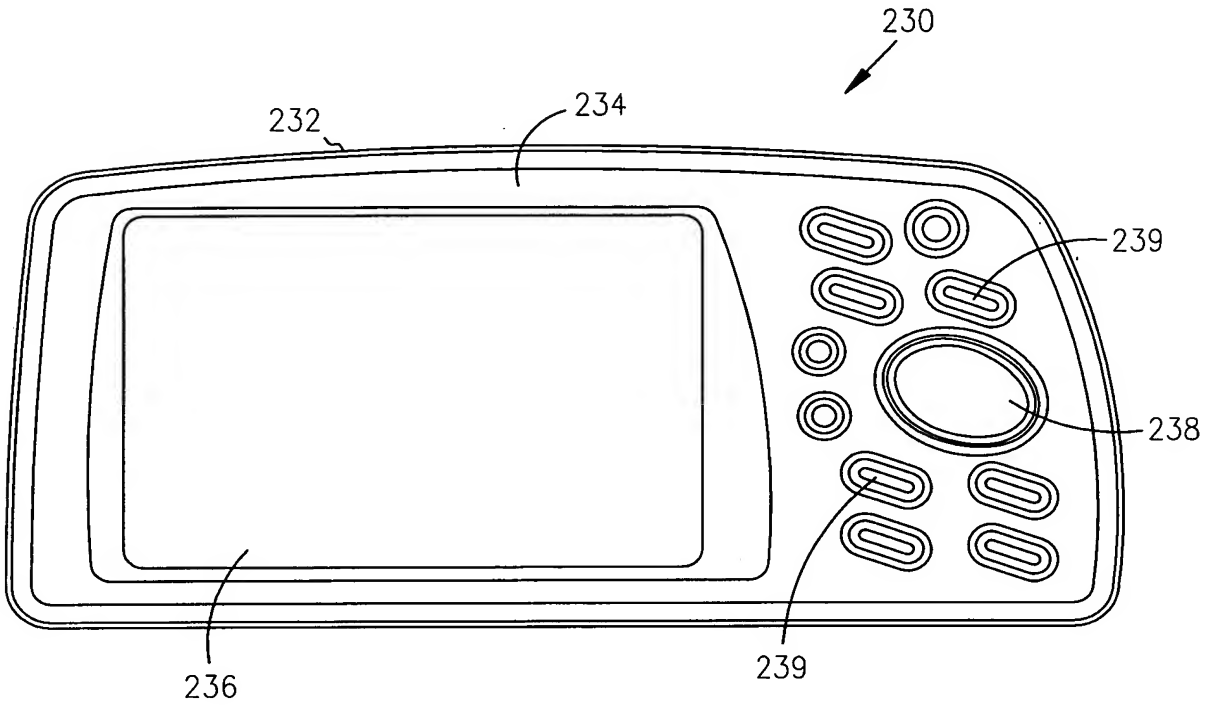

FIG. 2A

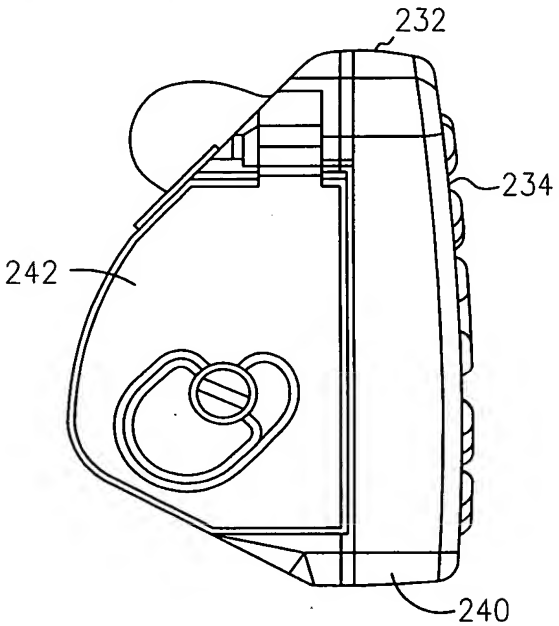

FIG. 2B

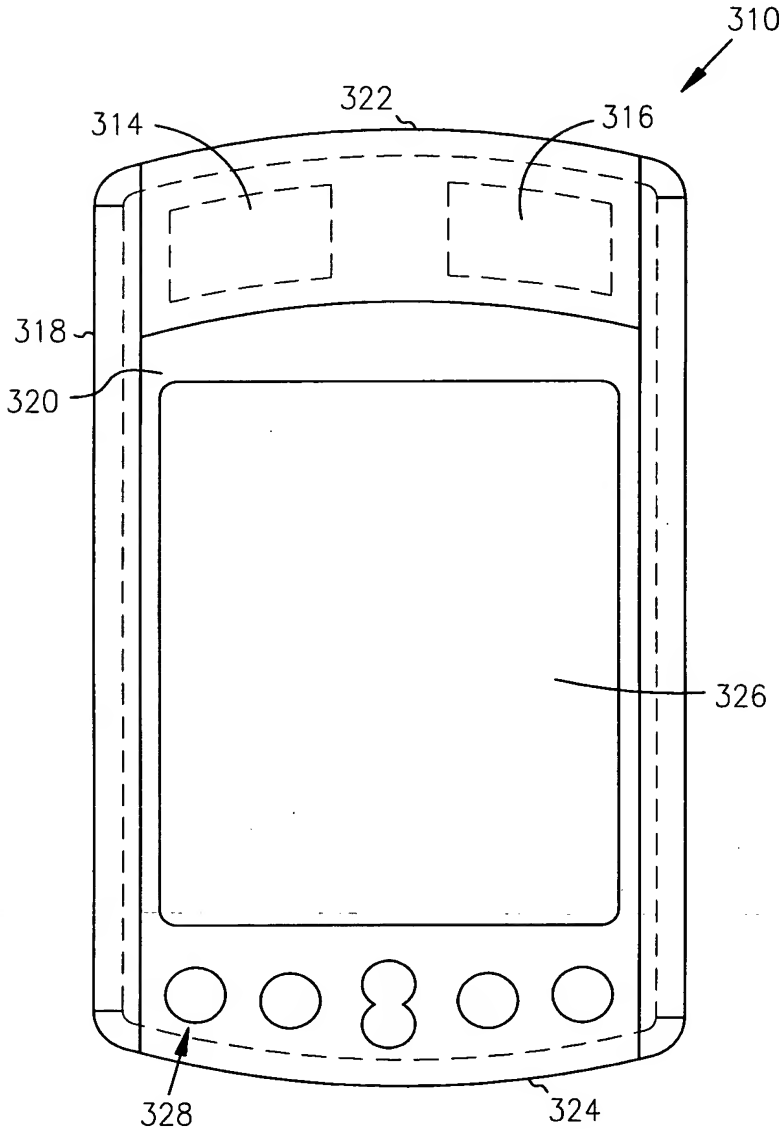

FIG. 3A

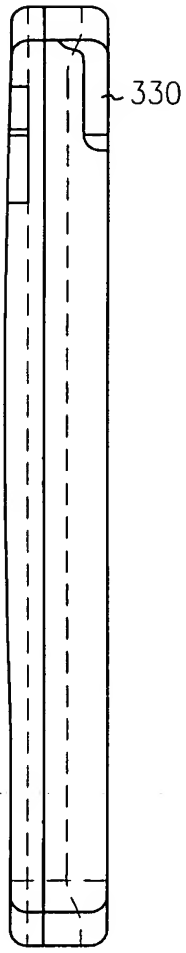

FIG. 3B

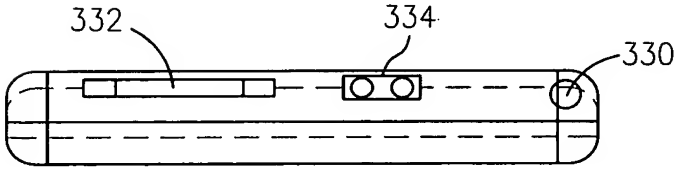

FIG. 3C

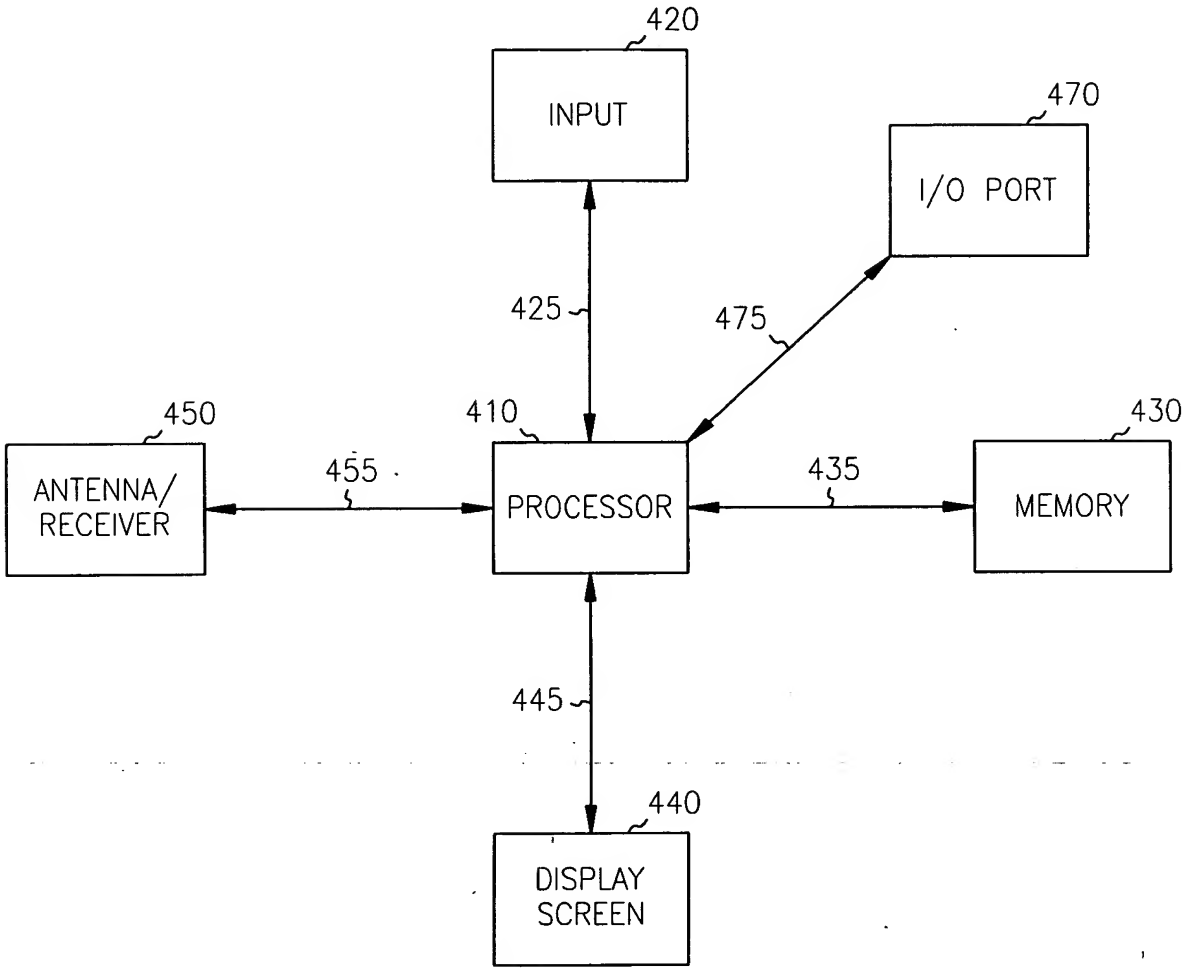
420
INPUT
470
I/O PORT
425
475
450
410
430
ANTENNA/
RECEIVER
455
PROCESSOR
435
MEMORY
445
440
DISPLAY
SCREEN

FIG. 4A

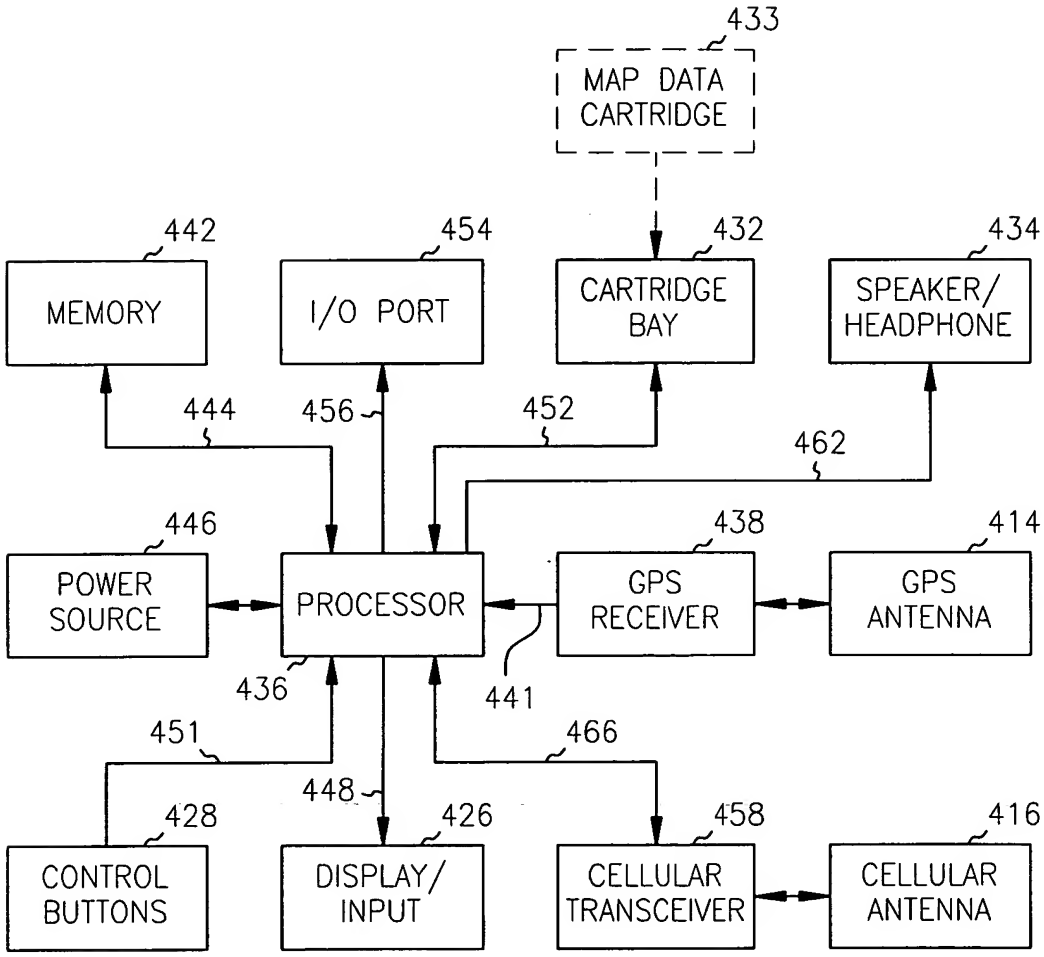
433
MAP DATA CARTRIDGE
442
MEMORY
454
I/O PORT
432
CARTRIDGE BAY
434
SPEAKER/ HEADPHONE
444
456
452
462
446
POWER SOURCE
PROCESSOR
438
GPS RECEIVER
414
GPS ANTENNA
436
441
451
466
448
428
CONTROL BUTTONS
426
DISPLAY/ INPUT
458
CELLULAR TRANSCEIVER
416
CELLULAR ANTENNA

FIG. 4B

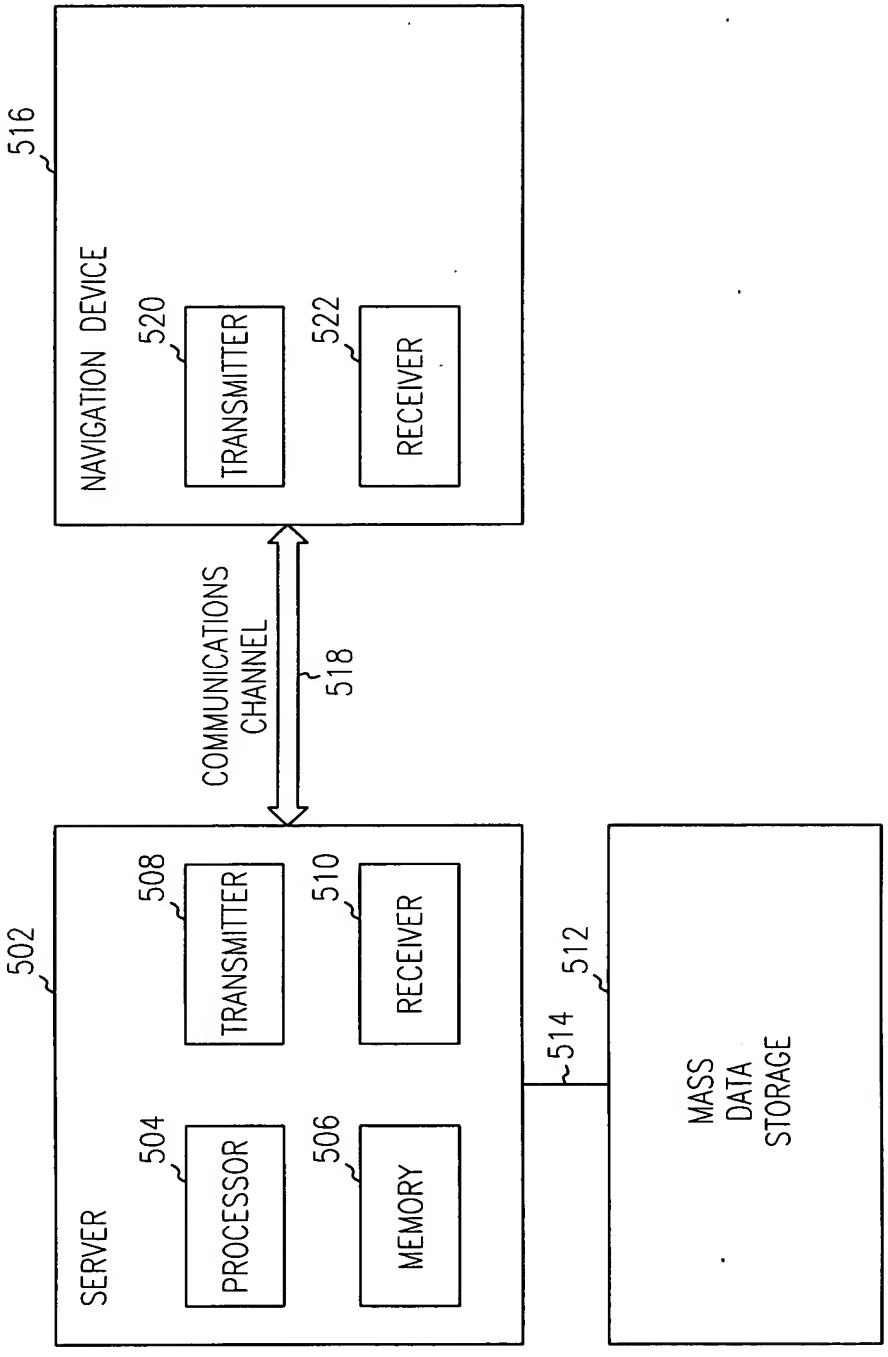
516
NAVIGATION DEVICE
520
TRANSMITTER
522
RECEIVER
COMMUNICATIONS CHANNEL
518
502
SERVER
508
TRANSMITTER
510
RECEIVER
504
PROCESSOR
506
MEMORY
514
512
MASS DATA STORAGE

FIG. 5

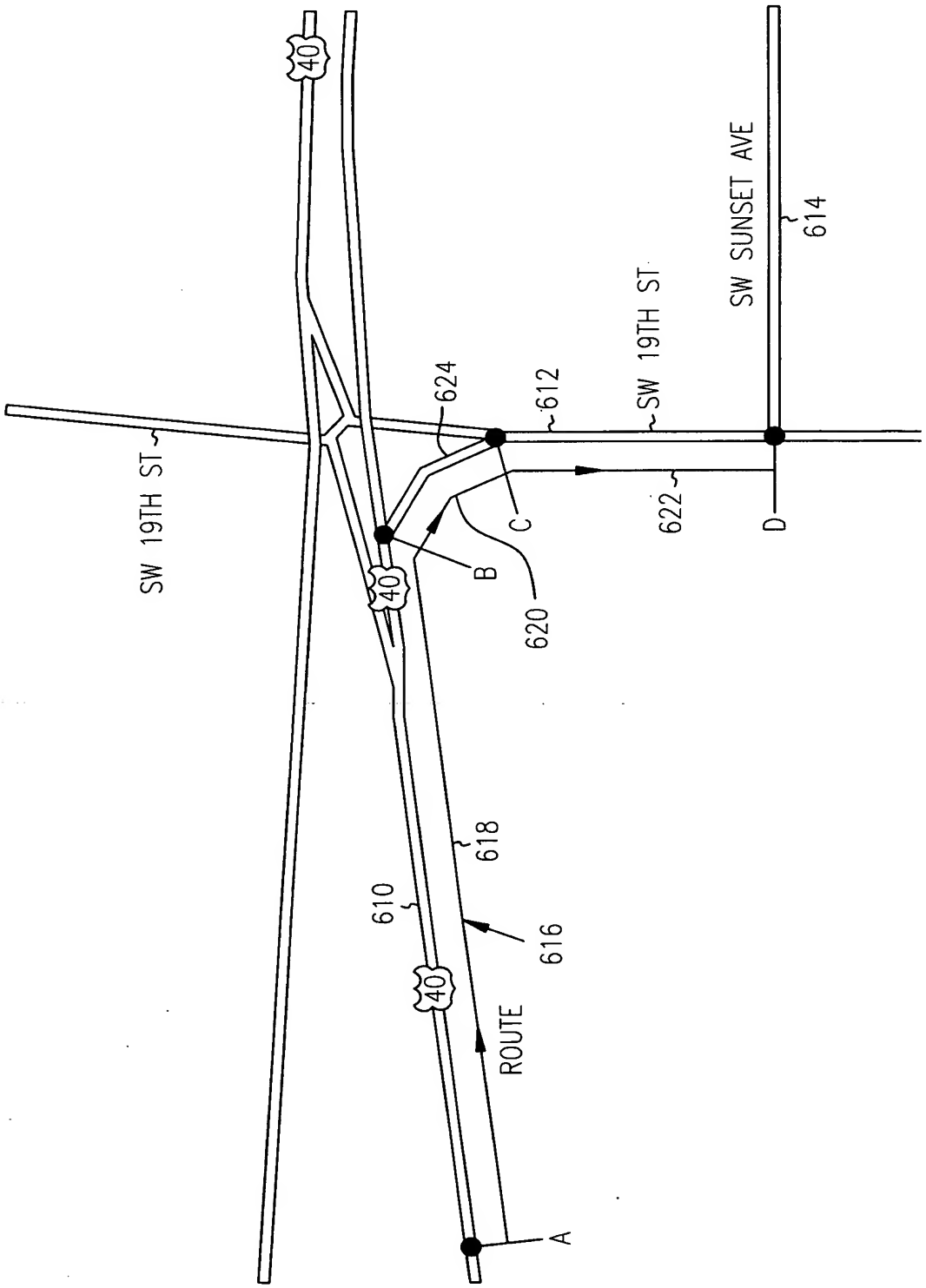
40
SW SUNSET AVE
614
SW 19TH ST
624
612
SW 19TH ST
622
D
C
B
620
40
618
610
616
40
ROUTE
A

FIG. 6

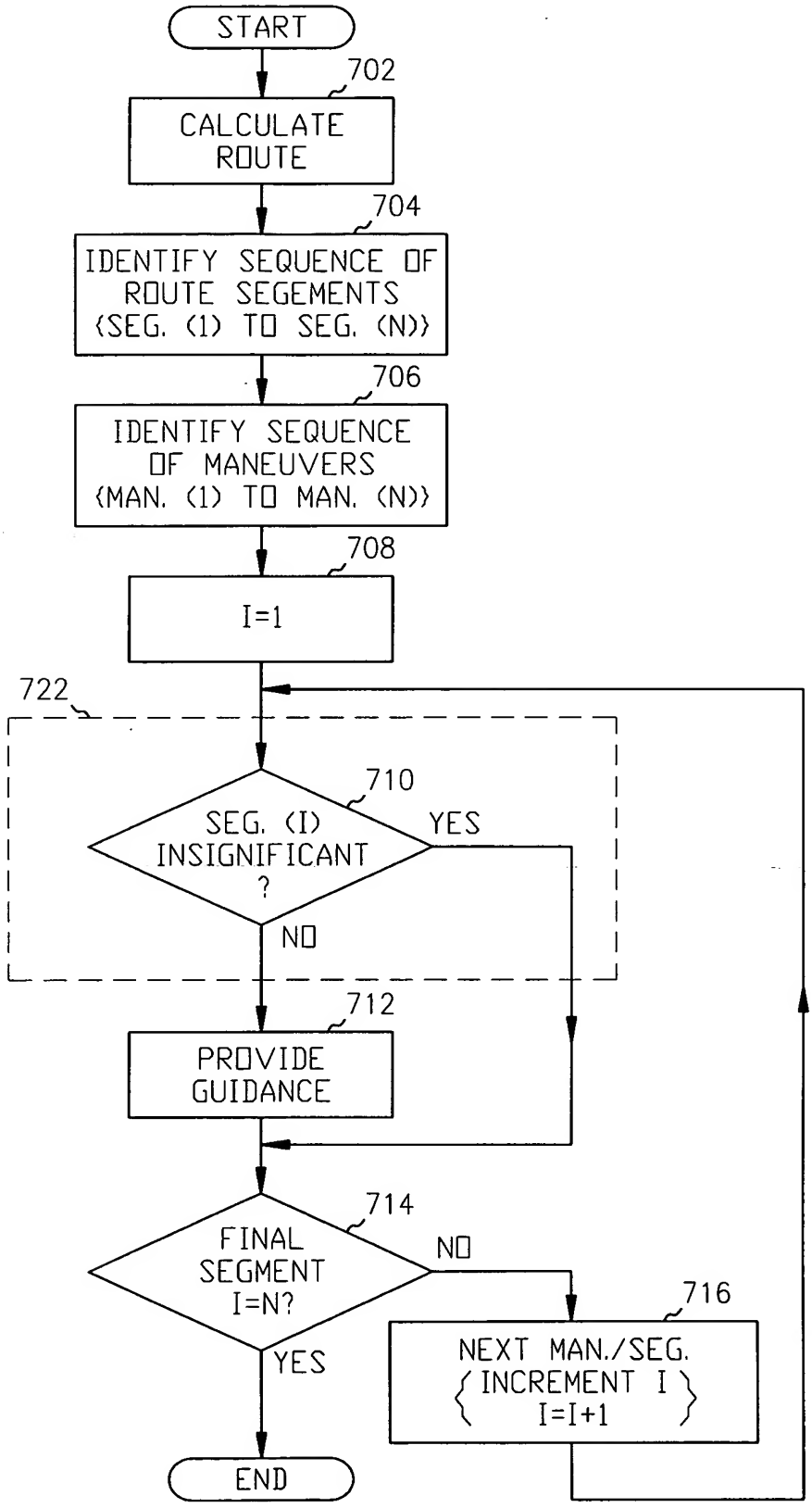
START
702
CALCULATE ROUTE
704
IDENTIFY SEQUENCE OF ROUTE SEGEMENTS (SEG. (1) TO SEG. (N))
706
IDENTIFY SEQUENCE OF MANEUVERS (MAN. (1) TO MAN. (N))
708
I=1
722
710
SEG. (I) INSIGNIFICANT ?
YES
NO
712
PROVIDE GUIDANCE
714
FINAL SEGMENT I=N?
NO
YES
716
NEXT MAN./SEG. INCREMENT I I=I+1
END

FIG. 7

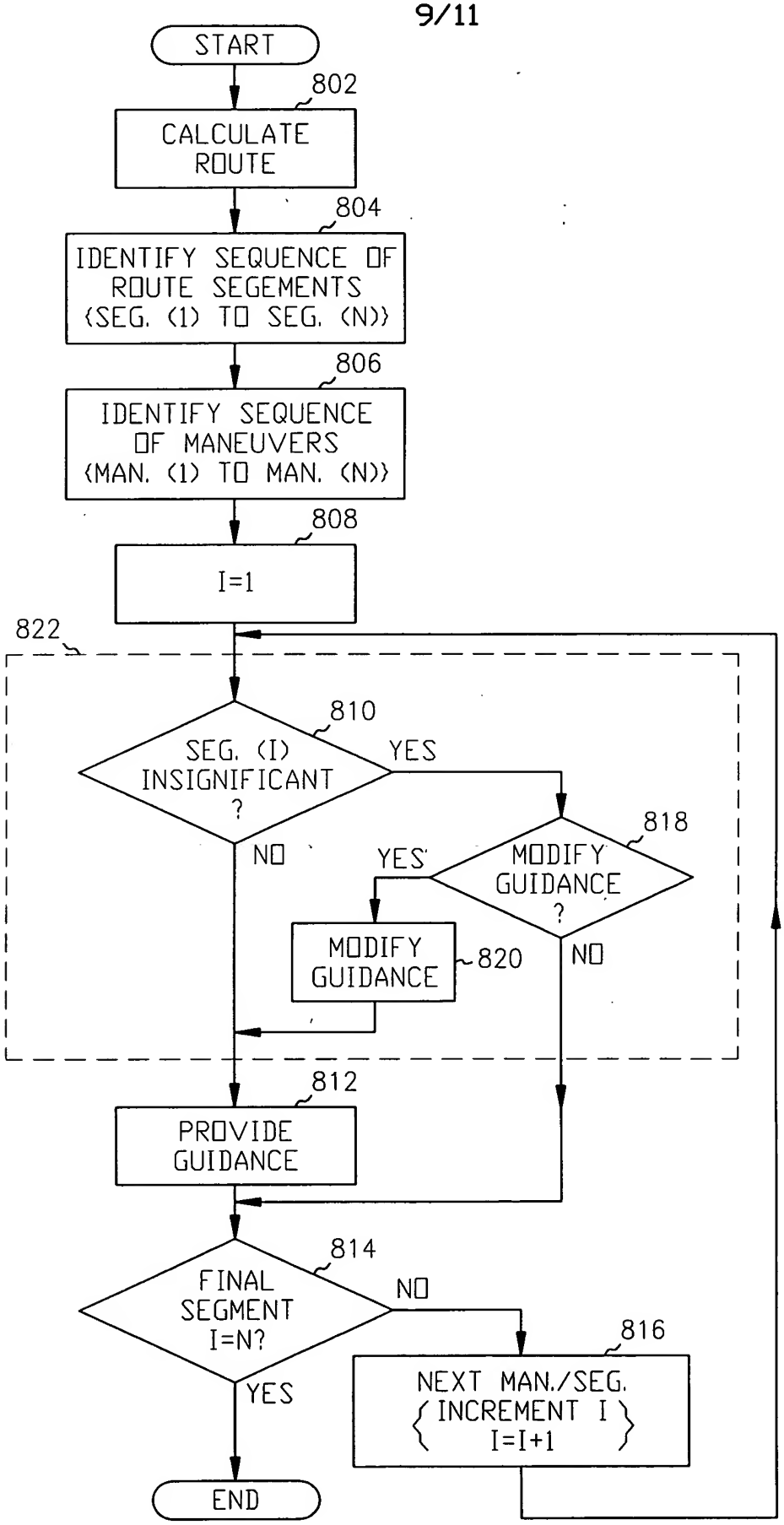
START
802
CALCULATE ROUTE
804
IDENTIFY SEQUENCE OF ROUTE SEGEMENTS (SEG. (1) TO SEG. (N))
806
IDENTIFY SEQUENCE OF MANEUVERS (MAN. (1) TO MAN. (N))
808
I=1
822
810
SEG. (I) INSIGNIFICANT ?
YES
NO
818
MODIFY GUIDANCE ?
YES
NO
MODIFY GUIDANCE
820
812
PROVIDE GUIDANCE
814
FINAL SEGMENT I=N?
NO
YES
816
NEXT MAN./SEG. { INCREMENT I } I=I+1
END

FIG. 8

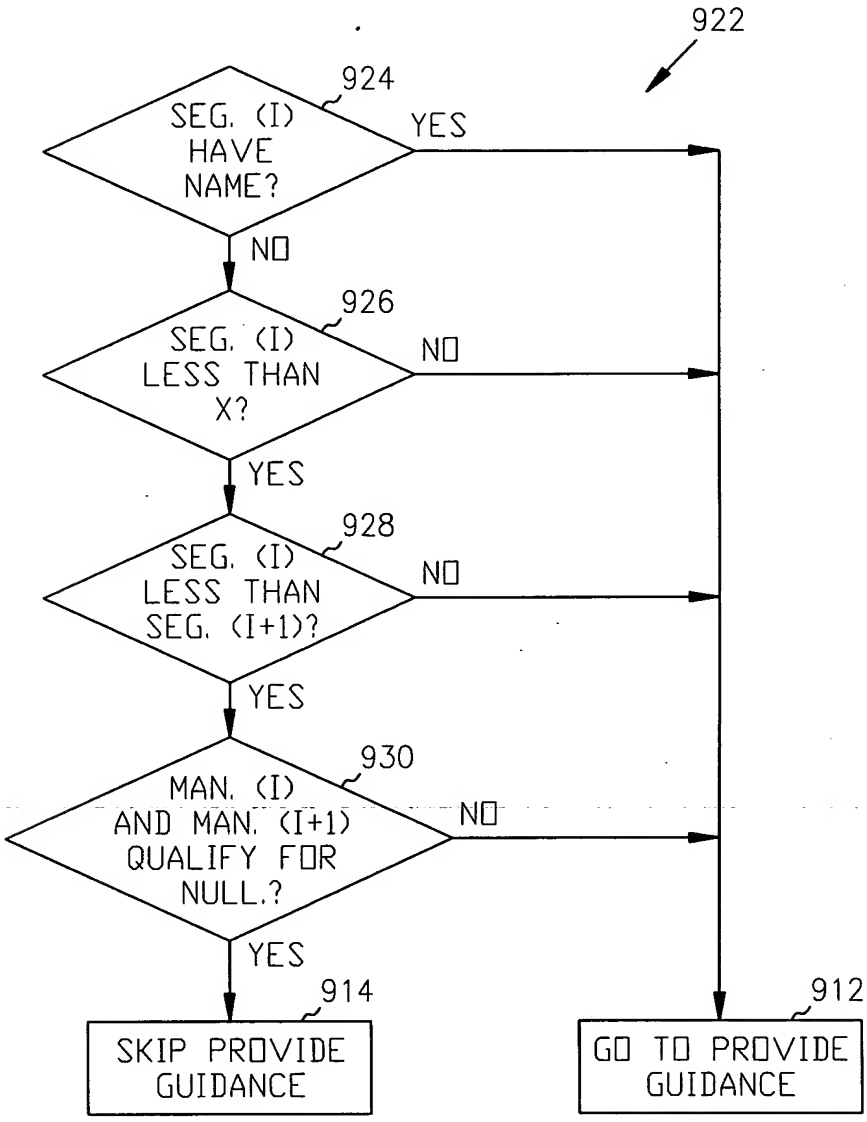
922
924
SEG. (I) HAVE NAME?
YES
NO
926
SEG. (I) LESS THAN X?
NO
YES
928
SEG. (I) LESS THAN SEG. (I+1)?
NO
YES
930
MAN. (I) AND MAN. (I+1) QUALIFY FOR NULL.?
NO
YES
914
SKIP PROVIDE GUIDANCE
912
GO TO PROVIDE GUIDANCE

FIG. 9

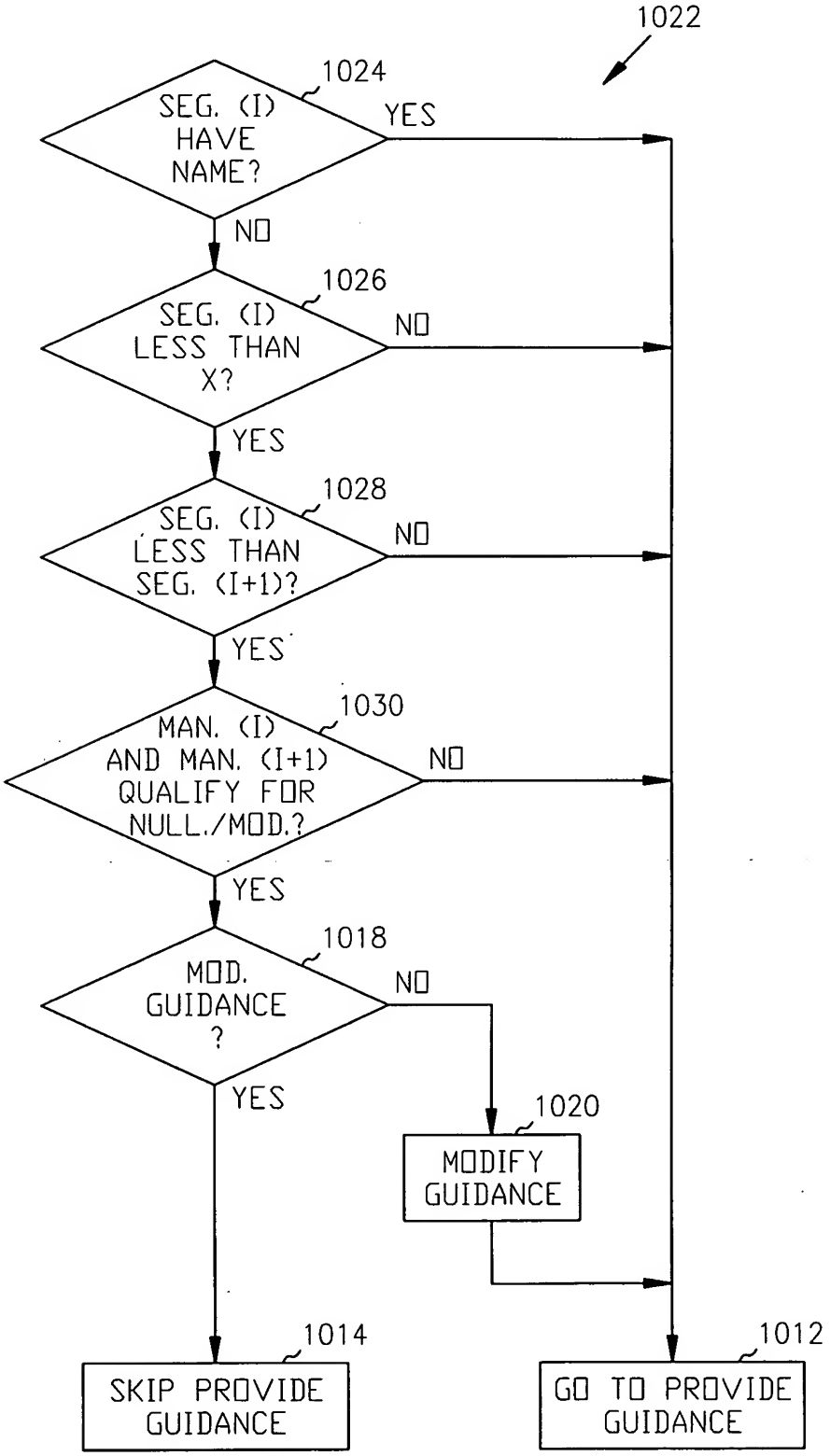
1022
1024
SEG. (I) HAVE NAME?
YES
NO
1026
SEG. (I) LESS THAN X?
NO
YES
1028
SEG. (I) LESS THAN SEG. (I+1)?
NO
YES
1030
MAN. (I) AND MAN. (I+1) QUALIFY FOR NULL./MOD.?
NO
YES
1018
MOD. GUIDANCE ?
NO
YES
1020
MODIFY GUIDANCE
1014
SKIP PROVIDE GUIDANCE
1012
GO TO PROVIDE GUIDANCE

FIG. 10